

in cost between laying fiber along a railroad line across Nebraska and trenching in downtown Los Angeles. Plainly, the costs of acquiring rights of way and laying conduit are far higher in urban than rural environments. Moreover, carriers have far greater flexibility in planning routes for long-haul fiber than in connecting two points in dense urban areas, allowing providers of long-haul transport to minimize their fiber deployment costs. Additionally, Dr. Wilkie's analysis relies on data concerning long-haul transport rates from shortly after a crash in intercity transport rates caused by the well-known glut in intercity fiber capacity. Thus, Dr. Wilkie's comparison is inapposite, and the conclusions he draws from it wholly unreliable.

24. But even if such a comparison were appropriate, Dr. Wilkie fails to report even the most basic results of his regression analysis, including whether his estimated coefficients are statistically significant. This is inconsistent with professional practice and makes interpreting and evaluating his results essentially impossible. From the perspective of professional economics, this makes his "results" mere assertion, rather than any type of scientific evidence. The study is also replete with inapposite assumptions and modeling conventions.<sup>26</sup> In particular, it hypothesizes competitive markets that would be in perpetual equilibrium with prices driven to costs and costs driven by distance. This is wholly unrealistic. As a consequence, Dr. Wilkie's modeling effort is not a reliable basis for the conclusions and policy recommendations for which he argues.

---

<sup>26</sup> The model relates price to a simple measure of distance and ignores nonlinearities as well as causal variables other than distance that can affect special access service prices. The model does not even attempt to assess, for example, the capacity, customer characteristics and density, non-linearities in cost structures, or numbers of suppliers in the markets examined. Such omissions are sources of statistical bias. Moreover, in applying "ordinary least squares" estimation techniques, the model fails to even entertain the possibility of simultaneous supply and demand factors as price determinants.

25. The same conclusion applies to the “exploratory” regression analysis cited by XO Communications.<sup>27</sup> In that analysis, the authors similarly hypothesize an unrealistic, perpetual, long-run price-cost equilibrium if markets are competitive. Moreover, they do not measure the prices actually paid in price flex markets, and take no account of the higher risks associated with month-to-month pricing plans when ILECs face competition that can readily take customers away from them (*i.e.*, the risk that a customer that purchases service out of such plans is unusually likely to cancel service before the ILEC can recover the considerable fixed costs of serving that particular customer).<sup>28</sup> No account is taken of marketplace capacities, customer characteristics, or the numbers and types of competitors. Ultimately, the study takes regulated price caps as a key benchmark, without effectively inquiring whether those price caps are above or below competitive levels. The consequence is that the analysis is useless as an inquiry into both the actual prices being paid under pricing flexibility and how those prices may vary with competitive conditions.

26. In sum, simply looking at the direction of price movements is not sufficient to determine the presence or effectiveness of competition in any market. Competition is not synonymous with consistently falling prices in all markets. When supply capacity tightens in the face of demand, prices tend to rise; when capacity constraints slacken, prices tend to decline. Such changes in price are precisely the signals that spur competition and help competitors make efficient decisions about the allocation of resources. Modeling markets as perpetually in a

---

<sup>27</sup> Phoenix Center Policy Paper at 9, 23, 27.

<sup>28</sup> Casto Reply Decl ¶ 38.

perfect equilibrium, as do the aforementioned regression analyses, misses these most critical of economic points.

27. Finally, notwithstanding selective citations of instances of price increases, Mr. Casto's Reply Declaration documents the fact that average prices paid for SBC's special access services are, indeed, on a downward trend. For example, the average price paid per channel termination for SBC's DS1 service came down [BEGIN CONFIDENTIAL INFORMATION] [END CONFIDENTIAL INFORMATION] over 2001-

04. The average price of SBC's DS3 service came down [BEGIN CONFIDENTIAL INFORMATION] [END CONFIDENTIAL INFORMATION] over the same period.<sup>29</sup>

28. **Rates of Return.** Parties such as WilTel, XO Communications and the Ad Hoc Committee all make the flawed argument that special access accounting rates of return are conclusive evidence of ILEC market power and anticompetitive pricing.<sup>30</sup> As discussed in my and others' opening declarations,<sup>31</sup> it is wholly inappropriate to rely upon individual-service-level rates of return, particularly using ARMIS data and particularly when special access services rely on the joint and common costs of the ILECS' multi-product networks.

---

<sup>29</sup> Casto Reply Decl ¶ 27.

<sup>30</sup> Ad Hoc Comments at 27-28; ETI Comments at 27-35; WilTel Comments at 10; XO Comments at 7-8.

<sup>31</sup> See, e.g., Declaration of William E Taylor on Behalf of Verizon (hereinafter, "Taylor Declaration") at ¶ 93-95; Declaration of Harold Furchtgott-Roth and Professor Jerry Hausman, on Behalf of BellSouth Communications (hereinafter, "Furchtgott-Roth/Hausman Declaration") at 38-40; Declaration of David Toti on Behalf of SBC Communications at ¶¶ 3-5, 38-41.

29. Indeed, even putting aside the methodological and computational issues with ARMIS and the essentially insoluble problems of attributing joint and common network costs to individual services, the proffered interpretations of rate-of-return data are inconsistent with sound economic reasoning. Similar to increasing prices, high economic rates of return are market signals that spur entry and competition. When entry is feasible (as it demonstrably is here), utilizing regulation to knock down prices and associated rates of return that would otherwise attract entry would undermine competition and consumer welfare in the long run.

30. In addition, even were there a reliable basis for finding economic meaning in accounting rates of return for sub-products of multi-product network firms like ILECs (which there is not), there are many reasons other than a lack of competition for an industry to report relatively high measured accounting returns. These range from regulatory uncertainty to the pace of technological improvements. For example, in industries characterized by large research, development, or investment costs for products that have relatively short technological lives (such as computer components), it is common to see high returns as investments are recovered in relatively short periods of time.

31. Increasingly, the special access arena is one in which technological advances could rapidly render investments obsolete by luring customers to alternative providers of service. In fact, as Mr. Casto describes, a number of SBC's customers have negotiated 'technology clauses' into their contracts.<sup>32</sup> These clauses specifically allow customers to be released from their contractual obligations to SBC in the event that a competitor that offers service through a new, more attractive technology enters the market. In the face of rapid technological

---

<sup>32</sup> Casto Initial Decl. ¶ 53.

improvement, this means that a premium must be placed on relatively rapid recovery of investments.

32. In the face of such a dynamic marketplace, moreover, it is not sufficient for incumbents simply to remain static in their service offerings. In order to maintain their customer base, ILECs must upgrade existing assets to more effectively compete with the innovations of alternative service providers. For example, SBC has recently committed to a \$200 million upgrade of its fiber network while also pursuing a \$4-\$6 billion dollar investment in Project Lightspeed—an expansive undertaking intended to dramatically expand SBC's ability to deliver high-speed data, video, and voice services to households and small businesses.<sup>33</sup> SBC reports that it is also exploring possibilities in fixed wireless offerings.<sup>34</sup>

33. Given the increasing need to make these types of investment in developing new technologies and improved service offerings, relatively high accounting rates of return would not be unexpected, nor would they be they inconsistent with competitive markets.

#### **IV. DISCOUNTED BUNDLED SERVICE OPTIONS ARE NOT ANTICOMPETITIVE**

34. Several parties, lead by CompTel/ALTS, *et al.*, and including WilTel and T-Mobile, urge the Commission to prohibit discount programs, such as SBC's Managed Value Plan (MVP), arguing that such programs allow price cap LECs to parlay alleged market power in one market into sales in another market. They claim that these programs foreclose competition even

---

<sup>33</sup> SBC Press Release: SBC Communications to Rapidly Accelerate Fiber Network Deployment in Wake of Positive FCC Broadband Rulings (Oct. 14, 2004), *available at* <http://www.sbc.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=21427>.

<sup>34</sup> See Casto Reply Decl. ¶ 35.

in a geographic market where conditions otherwise would be conducive to entry.<sup>35</sup> Parties further assert that such discounts lock-up competitors, retarding entry and holding prices above competitive levels.<sup>36</sup> Notwithstanding their vociferousness, these claims are irreconcilable with both the evidence of actual entry in areas in which SBC has obtained pricing flexibility and sound economic reasoning.

35. Policymakers are properly skeptical when it comes to countenancing assertions by some competitors that some other competitors' prices are too low. Properly applied competition policy protects competition, not competitors. Claims by a number of the noted competitors to ILECs that volume and term discount programs are exclusionary and create insurmountable barriers to entry are unsupported by the actual history of entry in special access markets. The pattern of entry, both before and after the granting of Phase II price flexibility, provides clear empirical evidence contrary to these allegations.

36. In addition, the claims themselves are based on faulty application of economic reasoning. SBC's use of contracts and discount programs is entirely consistent with the actions of a firm in a competitive environment. Commitment-based discounts are a sales tool used by many firms, large and small, in many industries. In telecommunications, they allow sellers to better meet the requirements of different special access customers by offering a discount in return for increased stability of demand. Moreover, in providing a menu of different contracts in response to customer requests for arrangements that address specific, individual circumstances, sellers allow different customers to choose the contracts that best meet their needs. In addition,

---

<sup>35</sup> See, e.g., CompTel/ALTS Comments at ii-iii; WilTel Comments at 19.

<sup>36</sup> See, e.g., CompTel/ALTS Comments at ii-iii.

the “one-stop shopping” character of discounted bundling with duration commitments holds down buyers’ search and transaction costs, both across services and across time. This inhibits sellers from employing “finger-pointing” practices to deflect responsibility and allows clearer association of brand with quality. Feedback from buyers to suppliers holds suppliers’ feet to the fire in delivering service of promised and expected quality.

37. On the supplier side, by providing incentives for customers to sign a contract with volume and term commitments, bundling enables sellers to realize economies of scope in marketing and distribution, to hold down their transactions costs, and to reduce the risks and costs associated with unpredictable sales flows and investment utilization.<sup>37</sup> These factors improve efficiency and are pro-consumer. In the case of telecommunications, the importance of research, development and deployment of new technologies—often with relatively short lives due to the expected appearance of yet newer technologies, for example—makes it eminently rational for suppliers to seek to secure and stabilize substantial volumes of demand for substantial time periods as a means of reducing the risk that new investments may never have enough time to pay for themselves. Providing such assurance via bundling with volume and term commitments enhances the ability of the marketplace to continue to generate investment in research, development, and deployment—to the ultimate benefit of the consuming public.

38. The link between bundling and risk reduction is particularly relevant to telecommunications pricing. Specifically, in a well-functioning marketplace, sellers will offer discounts for extended-term commitments to purchase bundles of related services. It is hardly

---

<sup>37</sup> See, e.g., Yannis Bakos and Erik Brynjolfsson, “Bundling and Competition on the Internet,” 19 *Marketing Science* 63, 70 (2002).

surprising that relative to prices for month-to-month purchasing under standard offerings of UNEs, ILECs offer discounts on bundled, extended-term purchases of special access services. Indeed, with the evident rise in the numbers of competitors faced by ILECs (Figure R-1) since the advent of price flexibility, rates for month-to-month standard, unbundled service offerings on which opponents of Price Flex in this proceeding focus so much of their attention may indeed rise upon granting of Phase II flexibility: The evident increase in competition implies that month-to-month tariff customers are now much less secure as a customer base for ILECs. As such, they raise an ILEC's risks—and this means upward pressure on month-to-month rates in well-functioning markets. The customers that hold down supplier risk with bundled, large volume commitments receive discounts in a well-functioning market with these characteristics.

39. The positive effects of bundling on buyers and suppliers are the source of its ubiquity in the modern economy.<sup>38</sup> In fact, bundling is a common means by which new entrants hold down their costs, make themselves attractive to customers, and break into a market. Seen in this light, it is not surprising that competitive providers routinely tout their own abilities to bundle services as an entry-enhancing mechanism for attracting customers—as when cable providers promote their “one medium” approach to telecommunications.<sup>39</sup>

---

<sup>38</sup> See, e.g., Thomas Nagle and Reed Holden, *The Strategy and Tactics of Pricing: A Guide to Profitable Decision Making* at 244-45 (3rd ed. 2002).

<sup>39</sup> See, e.g., *Cox Commercial Unit Wins New Business, Competitors Undaunted*, *supra* n.12. See also, “Cox Business Services Answers Call for Flexible Telecommunication Solutions for Small Businesses”, *supra* n.11; and Timothy J. Muris, Comments on Antitrust Law, Economics, and Bundled Discounts, Submitted on Behalf of the United States Telecom Association in response to the Antitrust Modernization Commission's Request for Public Comments at 2n.4 (July 15, 2005).



40. Notwithstanding the foregoing economics of the benefits of bundling and bundled discounts, opponents of the Price Flex framework assert that ILECs' bundled contracts are anticompetitive. These assertions take two related forms: so-called "leveraging" and purported "exclusion." WilTel, for example, asserts that "ILECs are leveraging their monopoly control over some local markets to inhibit customer service in others."<sup>40</sup> CompTel/ALTS, *et al.*, meanwhile, assert exclusion and claim that "BOCs have been able to entrench their market power by adopting pricing plans . . . that effectively lock up demand and prevent [other] carriers from reaching sufficient scale to become effective competitors . . . ."<sup>41</sup> In fact, these alternative phrasings assert essentially the same thing: that bundled discounts somehow exclude competitors from what might otherwise be competitive markets—leaving ILECs with "entrenched" positions in those markets—by enabling ILECs to attract so much business that too few customers are left to make entry viable.

41. Despite theoretical claims that bundling can pose threats to the competitive vigor of markets in hypothetical settings, bundled discounts improve consumer well-being under virtually all conditions.<sup>42</sup> The reason is, as the Supreme Court noted, "[l]ow prices benefit consumers regardless of how those prices are set, and so long as they are above predatory levels,

---

<sup>40</sup> WilTel Comments at 19. At one point, WilTel uses the term "tying" in its depiction of bundled discount pricing. *Id.* The economics described and the facts of bundled offerings here, however, do not conform to the antitrust concept of tying, wherein the purchase of a monopolized good or service is conditioned on the purchase of a second competitively supplied good or service. No such conditioning occurs in the case at hand; ILECs' individual special access services are available on an unbundled basis. Rather, WilTel appears to have some notion of leveraging in mind when asserting tying.

<sup>41</sup> CompTel/ALTS Comments at 11.

<sup>42</sup> *See, e.g.,* Muris, *supra* n.39.

they do not threaten competition.”<sup>43</sup> Similarly, as (now-Justice) Stephen Breyer has explained, a firm’s above-cost price cut “is almost certainly moving price in the ‘right’ direction (toward the level that would be set in a competitive marketplace),” and sound antitrust policy thus “very rarely reject[s] [such] beneficial ‘birds in hand’ for the sake of more speculative (future low-price) ‘birds in the bush.’”<sup>44</sup>

42. The evidence at hand does not indicate adverse effects on competition that might offset this central observation. First, ILECs’ bundled contract offerings cannot be seen as predatory in the anti-competitive sense of below-cost pricing. Indeed, central to complaining parties’ opposition to the Price Flex framework is their assertion that ILECs are pricing far above costs and realizing excessive profits and rates of return (see above).

43. Second, with respect to competitors who *do* utilize ILECs’ special access services, the straightforward evidence is that, in market after market, entrants routinely can and do obtain and sustain viable economic scale—notwithstanding assertions that competition has been excluded or leveraged out of the marketplace by ILECs’ bundled offerings and that entrants cannot obtain viable economic scale. As Figure R-1 illustrates, across large and small, dense and less dense markets, there is a steady increase in the number of competitors faced by SBC. The actual pattern is one in which multiple competitors not only enter, they survive.

44. Third, from the perspective of the customer, the decision to sign a contract with a volume and term commitment is an economic one. Customers make voluntary choices to enter

---

<sup>43</sup> *Brooke Group Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 223 (1993) (quoting *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 340 (1990)).

<sup>44</sup> *Barry Wright Corp. v. ITT Grinnell Corp.*, 724 F.2d 227, 234 (1st Cir. 1983).

into these contracts with price-cap LECs, fully knowing that they may have to meet certain volume or term limits to be eligible for discounts or to avoid penalties. When choosing to enter into a volume or term contract with any provider of special access services, a firm weighs the potential benefits of the contract (such as discounts) against the potential costs of the contract (including the length or extent of the commitment and any penalties associated with failure to meet the commitment). A buyer that is willing to commit certain amounts of traffic at a particular price or to a commitment of a certain length is able to obtain a contract and discount in reward for that commitment. Similarly, a buyer requiring more flexibility, unsure of its future demand for special access services or interested in maintaining the option to switch its future business to a potential entrant, can opt to choose a contract (or simply purchase services from the base tariff) that allows it greater flexibility in the future. This flexibility is costly to the extent that it puts an ILEC supplier's business more at risk of volatility. As discussed above, well-functioning markets charge buyers for such flexibility.

45. As Mr. Casto describes in his Reply Declaration, SBC is not able to leverage any purported market power in one area into bundled sales of all of its special access services. SBC's MVP discount plan clearly does not preclude others from chasing the same customers as SBC; and SBC demonstrably loses customers to competitors. Accordingly, when SBC does succeed in attracting a customer to its discount plan, its success cannot properly be labeled "exclusionary." It is everywhere and always the case in competitive markets that, when a customer decides to give business to seller A, seller B is "excluded" from selling that same business to that customer. But this is not "exclusionary" in any sense that raises competitive concerns. Indeed, it is the

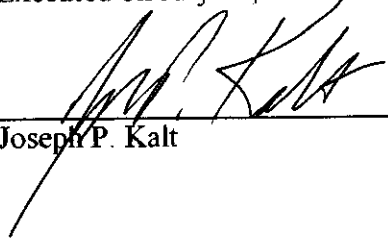
outcome of *competition* between A and B. In the same vein, assertions that SBC's MVP or similar plans are "exclusionary" abuse the concept of anticompetitive exclusion.

## V. CONCLUSION

46. I believe that the evidence and the economics indicate that the Price Flex/CALLS regulatory system for special access services is well adapted to the challenges of an industry in transition. It is clear from the evidence and the economics that the transition to special access service markets with more competitors and more choice for buyers is well underway and is not being impeded by substantial barriers to entry or by exclusionary marketing practices. The Price Flex triggers do not show evidence of some systematic failure in the form of allowing pricing flexibility to ILECs where competition is, in fact, not yet workable. As I discussed at length in my prior declaration, policies of the type that a number of parties have called for in this proceeding—re-initializing rates to prior price-cap levels, allowing only upward pricing flexibility, and/or imposing "X" (productivity) or "g" (growth) factors, and the like—are not warranted. Turning back the regulatory clock now would be inconsistent with the public's interest in seeing the industry transition to a more competitive future.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on July 29, 2005.



\_\_\_\_\_

Joseph P. Kalt

D

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access Rates for Price Cap Local	)	WC Docket No. 05-25
Exchange Carriers	)	
	)	
AT&T Corp. Petition for Rulemaking to Reform	)	
Regulation of Incumbent Local Exchange Carrier	)	RM-10593
Rates for Interstate Special Access Services	)	
	)	

**REPLY DECLARATION OF DAVID TOTI  
ON BEHALF OF SBC COMMUNICATIONS INC.**

**I. INTRODUCTION AND SUMMARY OF CONCLUSIONS**

1. My name is David Toti. I am the same David Toti who previously filed a declaration in this proceeding on June 13, 2005. The purpose of this reply declaration is to address the claims of certain parties regarding the alleged need for increased regulation of the Bell Operating Companies' ("BOCs") interstate special access services, claims based primarily on purportedly excessive rates of return for these services as calculated using the data reported in the Automated Reporting Management Information System ("ARMIS").

2. As I explained in my initial declaration, it would be problematic to rely on ARMIS data for the purpose of this proceeding, in particular using it to calculate jurisdictional, Part 69 element specific rates of return, because such data is based on outdated cost allocation rules and frozen allocation factors. Nevertheless, a number of parties continue to cite the allegedly high special access rates of return calculated using ARMIS data as a justification for

re-regulating special access services.<sup>1</sup> Many of these parties simply take the ARMIS data at face value, without acknowledging the inherent complications in the current cost allocation rules that limit the reliability of that data and therefore undermine the use of such data for this proceeding. Such blind reliance on ARMIS data is misplaced, for all of the reasons set forth in my initial declaration and below.

3. Certain other parties appear to acknowledge the potential for flaws in the ARMIS data, but argue that any misallocations of costs reported in ARMIS would be limited or constant in degree.<sup>2</sup> These parties suggest that ARMIS data can still be used to derive overall “trends” for special access rates of return, even if the absolute rates of return are not accurate. But the problems identified in my initial declaration prevent reliance on even the trends of element-specific rates of return for this proceeding.

---

<sup>1</sup> See Comments of the Ad Hoc Telecommunications Users Committee, filed in WC Docket No. 05-25, June 13, 2005, at 29 (“Ad Hoc Comments”); Comments of CompTel/ALTS, Global Crossing North America, Inc., and NuVox Communications, filed in WC Docket No. 05-25, June 13, 2005 at 5-6 (“Comptel/ALTS Comments”); Comments of ATX Communications Services, Inc., Bridgecom International, Inc., Broadview Networks, Inc., Pac-West Telecom, Inc., US LEC Corp., and U.S. Telepacific Corp., d/b/a Telepacific Communications, filed in WC Docket No. 05-25, June 13, 2005, at 7-10 (“ATX Comments”); Comments of Broadwing Communications, LLC, and Savvis Communications Corp., filed in WC Docket No. 05-25, June 13, 2005, at 3, 28 (“Broadwing/SAVVIS Comments”); Comments of Nextel Communications, Inc., filed in WC Docket No. 05-25, June 13, 2005 at 13 (“Nextel Comments”); Comments of T-Mobile USA, Inc., filed in WC Docket No. 05-25, June 13, 2005, at 7, 11 (“T-Mobile Comments”); Comments of Time Warner Telecom, filed in WC Docket No. 05-25, June 13, 2005, at 15-16 (“Time Warner Telecom Comments”); Comments of XO Communications Inc., filed in WC Docket No. 05-25, June 13, 2005, at 5 (“XO Comments”); Declaration of Simon J. Wilkie, T-Mobile Comments, Attach. B, ¶ 20 (“Wilkie Decl.”) (citing Noel D. Uri & Paul R. Zimmerman, *Market Power and the Deregulation of Special Access Service by the Federal Communications Commission*, 13 Info & Comm. Tech. L 122 (2004) (“Uri & Zimmerman”)).

<sup>2</sup> See Ad Hoc Comments at 29.



4. The problems with the ARMIS data also undermine claims that expenses per special access voice grade equivalent have decreased at a faster rate than revenues:<sup>3</sup> simply put, the measure of expenses these claims use is based on the same element-specific cost data that is distorted by the outdated cost allocation rules and frozen allocation factors.

5. Finally, claims that BOCs' costs are *over-allocated* to special access under ARMIS, resulting in *understated* BOC rates of return for special access, are inaccurate. The ETI White Paper on which these claims are based relies on faulty data analysis and line count data that is either unverifiable or inaccurate.

## **II. RELIANCE ON SPECIAL ACCESS COST DATA REPORTED IN ARMIS WOULD BE MISPLACED**

6. As noted above, most of the parties advocating re-regulation of the BOCs' special access services rely on the allegedly "excessive" rates of return for those services, as calculated using ARMIS data, to justify their positions. Several of these parties, including, for example, T-Mobile and Time Warner Telecom, also rely on a 2004 study by FCC economists Noel Uri and Paul Zimmerman.<sup>4</sup> That study concludes, based on the rates of return calculated from ARMIS data, that the BOCs appear to exercise market power in the special access market.<sup>5</sup> But since Uri

---

<sup>3</sup> See *id.* at 25-26.

<sup>4</sup> See T-Mobile Comments at 10-11; Time Warner Telecom Comments at 15-16; *see also* Wilkie Decl. ¶ 20.

<sup>5</sup> In particular, in that study, Uri and Zimmerman contend, that "at least looked at from an aggregate perspective, it appears that the market for special access service lends itself to the exercise of market power," and that "rate of return data seem to indicate that this power is de facto being exercised." They further contend that "[r]elative to what one would expect in a competitive market, the rates of return for special access seem excessive and growing along with the demand for special access service." Uri and Zimmerman at 126.

and Zimmerman's calculated rates of return are based on ARMIS data and its inherent cost allocation problems, their analysis is fundamentally flawed and cannot justify turning back the regulatory clock for special access to out-moded forms of regulation.

7. I have already addressed, in my initial declaration, assertions that are essentially the same as those made by Uri and Zimmerman and the commenters citing them. I explained that it would be inappropriate and unreasonable for the Commission to rely on the jurisdictional, Part 69 element specific rates of return calculated using ARMIS data. The element-specific costs reported in ARMIS are based on "separations" rules which, even several years ago, were "outdated regulatory mechanisms . . . out of step with [the] rapidly-evolving telecommunications marketplace."<sup>6</sup>

8. In addition, the Commission's 2001 decision to freeze (at 2000 levels) the categorical and jurisdictional factors used by the ILECs to allocate costs among ARMIS service categories introduces even more potential distortion to the cost allocations results because the frozen allocation factors will not properly account for changes in the way costs are incurred. As I explained in my initial declaration, over the last five years, special access volumes and revenues grew dramatically, while switched access lines and combined interstate common line and traffic sensitive revenues significantly *decreased*.<sup>7</sup> One reasonably would expect that ILECs

---

<sup>6</sup> See Report and Order, *Jurisdictional Separations and Referral to the Federal-State Joint Board*, 16 FCC Rcd 11382, 11383 ¶ 11(2001) ("*Separations Freeze Order*" or "*Freeze*"); see also Notice of Proposed Rulemaking, *Jurisdictional Separations Reform and Referral to the Federal-State Joint Board*, 12 FCC Rcd 22120-22123 ¶ 4 (1997) ("*Separations NPRM*") (concluding that legislative, technological, and market changes warranted a comprehensive reform of the separations process); Declaration of David Toti, filed in WC Docket No. 05-25 on June 13, 2005 ("Toti Initial Decl.").

<sup>7</sup> See Toti Initial Decl. ¶¶ 18-19. As I noted in my initial declaration, ARMIS data used in the analysis included in that declaration is based on currently filed ARMIS data. SBC is aware of and is currently analyzing certain data items (including access line counts) that will and/or

have shifted proportionately more investment to facilities used for special access, and away from switched access and other services, as a result of these changes in demand.<sup>8</sup> It would be a prudent use of its shareowners' money for SBC (or any other carrier) to invest in the area of its business that is growing. But because of the Freeze, carriers continue to allocate investment among various categories and between the intrastate and interstate jurisdictions in the same percentages that they used in 2000, which were generally based on the carriers' cost-causation studies and analysis performed during or before 2000. Meanwhile, the BOCs' assignment of revenues as reported in ARMIS generally reflects current activity associated with the various jurisdictions and access elements (and thus reflects the enormous growth in the demand for special access services over the last five years). The result is a mismatch between costs (which do not properly reflect current utilization and volumes) and revenues (which do). This kind of mismatch likely *overstates* the calculated rate of return for a service such as special access that has experienced significant growth in volumes.

9. As set forth in my initial declaration, a review of historical ARMIS cost allocation data for all BOCs corroborates that the separations freeze has likely caused a significant under-reporting of costs to special access. Before 2001, increases in ARMIS-reported interstate special access costs (calculated as percentages of total costs subject to separations) tended to keep pace with increases in ARMIS-reported interstate special access revenues (again, calculated as

---

may require revisions to its currently filed ARMIS data. However, SBC estimates that the magnitude of these items currently under review will not cause significant changes in the overall analysis and general conclusions set forth in my initial declaration or in this reply declaration. Once SBC completes its review, the analysis in these declarations will be updated to reflect any significant amendments to filed ARMIS results. *See id.* ¶ 21 n.4.

<sup>8</sup> Accelerating competitive risks from cable companies and new technologies such as VoIP will likely continue to exert pressure on BOC switched line counts and their related revenue streams.

percentages of total revenues subject to separations).<sup>9</sup> But *after* 2001, this relationship was severed due to the Freeze: interstate special access revenues as a percentage of total revenues subject to separations continued to grow, but the percentages of investment and expenses allocated to interstate special access *flattened out* during this same period.<sup>10</sup> The timing of this change in trend provides strong evidence that the change was an artificial byproduct of the Freeze.<sup>11</sup>

10. I also showed that the magnitude of the distortion of the Freeze — although difficult (if not impossible) to measure because the separations categories are not typical of how capital spending is tracked — is potentially quite large. While SBC's investment in Circuit Equipment grew \$6.5 billion from 2000 to 2004, the Freeze required SBC to apportion only \$1.7 billion of this growth to the "Wideband" categories, the interstate component of which are assigned entirely to special access.<sup>12</sup> An assumption that as much as 50% of the growth in Circuit Equipment since 2000 should have been allocated to Wideband yields \$1.1 billion of additional interstate special access investment.<sup>13</sup> And, if one reasonably assumes that, but for the Freeze, increases in interstate special access costs as percentages of total costs subject to separations would have continued to keep pace with increases in interstate special access

---

<sup>9</sup> See Toti Initial Decl. ¶ 21.

<sup>10</sup> See *id.* ¶¶ 22-24, 25-28. Growth in the special access revenue percentage continued despite decreasing average special access prices. See Declaration of Parley Casto on behalf of SBC Communications, Inc., filed in WC Docket No. 05-25 on June 13, 2005, ¶¶ 54-58 (June 13, 2005) ("Casto Initial Decl.").

<sup>11</sup> Toti Initial Decl. ¶ 24.

<sup>12</sup> *Id.* ¶ 34.

<sup>13</sup> *Id.* ¶ 34.

revenues as percentages of total revenues subject to separations, the result is even more pronounced: \$1.5 billion of additional Circuit Equipment would have been allocated to interstate special access.<sup>14</sup> Moreover, this is just one example (for just one BOC); other cost allocations of other plant as well as expense accounts are also potentially distorted by the freeze.<sup>15</sup>

11. Finally, I explained that a high level review of rates of return calculated using ARMIS data undermines the notion that rates of return for different services can be meaningfully analyzed in isolation from one another.<sup>16</sup> Although, for the reasons stated above, it is problematic to consider service-specific rates of return calculated using ARMIS data, the combined interstate/intrastate rate of return — which is inherently less susceptible to distortions caused by the separations process — is revealing. The BOC combined interstate/intrastate rate of return trended down — from approximately 16% in 1999 to approximately 13% in 2004.<sup>17</sup> If the BOCs' special access earnings were as high as some of the commenters allege, then the rates of return on the BOCs' other services would have sunk far below 13 percent — indeed, into negative territory in some cases for SBC.<sup>18</sup> Moreover, limiting the BOCs' special access earnings will necessarily impact the BOCs' combined interstate/intrastate rate of return,

---

<sup>14</sup> *Id.* ¶ 36.

<sup>15</sup> *Id.* ¶ 10 (describing impact on depreciation expense, network and general support expenses, network operations expenses, marketing expenses, customer operations expense, and corporate operations expense); *see also id.* ¶ 23.

<sup>16</sup> *Id.* ¶ 38.

<sup>17</sup> *Id.* ¶ 39.

<sup>18</sup> At SBC the calculated rate of return for interstate traffic sensitive services turned negative. *Id.* ¶ 40.

potentially causing that rate of return to drop even lower than the 2004 figure of 13%. Thus, focusing only on the special access rate of return makes no sense.

12. For these and all of the other reasons set forth in my initial declaration, commenters' reliance on the special access cost data reported in ARMIS is misplaced. These commenters ignore entirely the FCC's own pronouncements in the *Jurisdictional Separations Reform* proceeding that the separations process underlying ARMIS cost data is "outdated," and the impact of the Freeze.

13. Despite the unreliable nature of the jurisdictional, element specific cost data reported in ARMIS, several commenters nevertheless insist that ARMIS data can be used to identify *trends* in special access returns. For example, Ad Hoc asserts:

[W]hether or not ARMIS data includes minor cost mis-allocations at the margins does not affect the overall integrity of *trends* in the data, since those alleged mis-allocations do not change from period to period. In other words, even if the absolute rate of return developed for the special access category using ARMIS data is off by some percentage, the trend in the data (in this case steadily *up*) is nevertheless a reliable indicator of the BOCs' ability to increase prices to supracompetitive levels without fear of attracting competitive entry.<sup>19</sup>

Ad Hoc's attempt to portray the flaws in the ARMIS data as including only "minor cost misallocations at the margins" is misleading as to the potential magnitude of the problems with this data. Ad Hoc's suggestion that the cost misallocations do not change from period to period is also wrong. The allocation problems do continue to occur each year, but the impact is likely *growing* with each passing year, as the separation of costs using 2000 factors become ever more divorced from the actual manner in which BOCs make additional plant investment and incur costs to meet the specific demands for their products and services. The Freeze likely has caused

---

<sup>19</sup> See Ad Hoc Comments at 29 (emphasis in original).

a continually worsening mismatch between costs and revenues on a jurisdictional, access element basis. Consequently, even the “trends” suggested by the ARMIS data are unreliable.

### **III. CONTENTIONS THAT BOCS’ COSTS ARE *OVER-ALLOCATED* TO SPECIAL ACCESS UNDER ARMIS ARE GROUNDLESS.**

14. Certain commenters allege that ARMIS over-allocates rather than under-allocates BOC costs to interstate special access, implying that the calculated special access rates of return are actually too low.<sup>20</sup> These commenters rely on a declaration by Susan M. Gately — in particular the analyses displayed in Gately Updated Figure 3.3 and Updated Table 3.2<sup>21</sup> — that in turn builds on an earlier white paper that Gately coauthored for Economics and Technology, Inc (“ETI White Paper”).<sup>22</sup> Gately’s analysis purports to calculate the number of special access lines as a percentage of the combined total number of end user common lines and special access lines, and then compares that percentage to interstate special access average net investment as a percentage of total interstate average net investment. According to Gately, special access lines make up only 2.5% of total lines while special access investment makes up 31.7% of interstate net investment. She therefore concludes that it is more likely that the costs of other services have been improperly allocated to the special access category, rather than vice versa.

15. Gately’s analysis is flawed in several respects. First, Gately calculates the total number of access lines (the line count denominator) by adding together total BOC switched lines

---

<sup>20</sup> CompTel/ALTS Comments at 5; Nextel Comments at 13.

<sup>21</sup> See Declaration of Susan M. Gately on behalf of Ad Hoc Telecommunications Users Committee ¶¶ 13-14 (June 13, 2005) (“Gately June 2005 Decl.”).

<sup>22</sup> See Access Markets: Reality Or Illusion, A Proposal for Regulating Uncertain Markets (Economics and Technology, Inc., Aug. 2004) (Attach. A to Ad Hoc Comments) (“ETI White Paper”).

and total BOC special access lines.<sup>23</sup> Thus, the denominator includes access lines used for both interstate *and intrastate* purposes. However, Gately's analysis uses an investment denominator that only includes total *interstate* investment.<sup>24</sup> The result is an apples to oranges comparison, as Gately and the co-authors of the ETI White Paper themselves appear to acknowledge.<sup>25</sup> A more consistent approach would be to use as the investment denominator the combined total of both interstate *and intrastate* net investment. Attachment 1 shows the results of following this more consistent approach: interstate special access net investment (using ARMIS data) makes up only 11% of combined interstate plus intrastate net investment.<sup>26</sup>

16. Second, although the exact number of special access lines used in Gately's analysis is unclear, Gately's assertion that there are "about 4 million" such lines is unsupported and, in any event, appears to dramatically understate the actual count. The FCC statistical report that she cites<sup>27</sup> actually indicates that, as of December 2002, the combined BOCs' special access

---

<sup>23</sup> See Gately June 2005 Decl. ¶ 13.

<sup>24</sup> See *id.*, Updated Figure 3.3 and Updated Table 3.2.

<sup>25</sup> The ETI White Paper acknowledges that "only 25% of Common Line loop investment is allocated to the interstate jurisdiction." ETI White Paper at 33 n.63.

<sup>26</sup> The suggested approach described above also is not perfect, because ARMIS does not distinguish between interstate and intrastate special access lines; thus, the special access line count (the line count numerator) necessarily includes an intrastate component, whereas interstate special access average net investment (the investment numerator) does not. However, as the Commission observed in its *Notice* in this proceeding, the vast majority of special access lines are likely interstate. See Order and Notice of Proposed Rulemaking, *Special Access Rates for Price Cap Local Exchange Carriers*, 20 FCC Rcd. 1994, ¶ 27 & n.88 2005 ("Special Access NPRM"). Thus, my proposed adjustment (*i.e.*, the inclusion of intrastate investment in the investment denominator) removes far more distortion from Gately's line count/investment comparison than it adds.

<sup>27</sup> See ETI White Paper at 33 n.62 (citing Industry Analysis and Technology Division, Federal Communications Commission, *Statistics of Communications Common Carriers 2002/2003*, March 2, 2004 ("SOCC") at Table 2.6).



lines totaled 94.2 million.<sup>28</sup> Gately's figures are also inconsistent with those of Uri and Zimmerman, who state that the "percent of special access lines relative to all access lines" was just under 41 percent as of 2002.<sup>29</sup> Because SBC cannot trace Gately's 4 million figure to any of the sources she cites, or to any other source, SBC does not know what this figure is based on and thus cannot fully assess the results of Gately's analysis.<sup>30</sup>

17. Although Gately's declaration does not explicitly say so, it could be that Gately attempts to utilize a measure of special access lines by counting *circuits* rather than voice grade equivalents (VGE's), as they are commonly reported (including in ARMIS). If this was Gately's methodology, it was inappropriate. Because the cost of a DS1 or DS3 loop is clearly considerably higher than the cost of a voice grade loop,<sup>31</sup> the apparent assumption that "a loop is a loop" is clearly flawed and any conclusion that BOC costs are over-allocated to special access is invalid.<sup>32</sup>

---

<sup>28</sup> See SOCC at Table 2.6. One arrives at the 94.2 million figure by adding the digital special access lines (93,344,760) and the analog special access lines (872,370). This total is nearly identical to the number that I included in Attachment 1 of my initial declaration, which was based on ARMIS Report 43-08, Table 3.

<sup>29</sup> See Uri and Zimmerman at 126.

<sup>30</sup> In a footnote of the ETI White Paper, Gately states that "various sources put the line count at between 3.2 and 4.5 million," ETI White Paper at 33 n.62, but SBC is unable find either number in the sources that Gately cites.

<sup>31</sup> DS1 and DS3 loops consume significantly more network bandwidth than a voice grade loop and require significantly greater investment including electronic equipment at both ends for a DS1 copper loop, higher capacity electronic equipment at both ends for a DS1 fiber loop, and fiber optic terminals and multiplexing for a DS3 loop.

<sup>32</sup> Although SBC does not necessarily concur that ordered UNE rates accurately reflect the ILECs' full costs of providing such services, they can be used as reasonable proxies to highlight the cost differences between a voice grade line and special access lines such as DS1 and DS3. For example, in California, the adopted UNE DS1 loop rates are approximately five times higher than the voice grade UNE loop rates, and UNE DS3 loop rates are more than 50 times the voice

18. Third, in calculating the total BOC common lines (*i.e.*, switched lines), Gately appears incorrectly to use the number of switched lines for all *ILECs* (158 million).<sup>33</sup> However, the number of *BOC* switched lines identified in the 2002 FCC statistics that she cites is 147 million. This overstates the denominator by 11 million lines or approximately 7%.

19. Finally, Gately appears inexplicably and unnecessarily to rely on access line counts from 2002 (as reflected by her citation to 2002 statistics), even though she compares these line counts to investment figures from 2004.<sup>34</sup> As I discussed in my initial declaration, in recent years (including between 2002 and 2004) the number of special access lines has grown while the number of switched lines has declined.<sup>35</sup> Thus, Gately's comparison of switched and special access data from different years distorts the results of her analysis

20. In sum, Gately's comparative analysis between line counts and investment appears to be greatly distorted. The cumulative effect of her errors is to understate the percentage of special access lines as compared to total lines and to overstate the fraction of carrier investment attributable to those lines. The obvious conceptual and quantitative flaws in

---

grade UNE loop rates. The rate differentials in other SBC states also highlight these cost differences.

<sup>33</sup> Again, the exact number used in the Gately analysis and the source for that number are not entirely clear. The declaration states a round number of 158 million lines. The only number in the SOCC report cited by Gately that correlates to the 158 million figure is the line counts shown for all *ILECs* (158,397,824).

<sup>34</sup> See June 2005 Gately Decl. Updated Table 3.2 (citing FCC ARMIS Report 43-04, Access Report: Table I, YE 2004).

<sup>35</sup> As noted, in 2002, the combined *BOCs'* special access line count reported in SOCC was over 94 million. See *supra* footnote 28. By 2004, *BOC* special access lines had grown to 121.8 million, as reported in ARMIS. Conversely, the combined *BOCs'* switched lines have continued to decrease from 147.1 million in 2002 to 130.5 million in 2004. See Toti Initial Decl., Attach. 1.

that analysis call into question any conclusions drawn from her study, and thus commenters' allegations that BOC costs are over-allocated to special access.

#### **IV. CONTENTIONS THAT THERE IS A WIDENING GAP BETWEEN OPERATING EXPENSES AND OPERATING REVENUES ARE NOT RELIABLE.**

21. Ad Hoc alleges that, on a voice-grade-equivalent basis, "special access costs and expenses have fallen dramatically, creating a substantial gap between special access costs and rates."<sup>36</sup> Ad Hoc further alleges that the gap between special access costs and revenues is "ever increasing," and that this alleged trend, in conjunction with BOC special access pricing, "is a clear indication of market power."<sup>37</sup> Ad Hoc's allegations reiterate those made by Gately in her declaration, in which Gately purports to compare the trend of average special access revenue per VGE to average operating expense per VGE.<sup>38</sup>

22. This allegation, too, is seriously flawed. Gately calculates operating expense per VGE based on the same faulty ARMIS cost data discussed above. The special access costs reported in ARMIS are based on outdated and frozen allocation factors. Thus the downward trend in operating expense per line after year 2000 is severely impacted by the Freeze, which holds constant the categorical and jurisdictional allocators at 2000 levels and likely understates the costs for special access during a time when special access demand was soaring. This creates

---

<sup>36</sup> Ad Hoc Comments at 25.

<sup>37</sup> *Id.* at 26.

<sup>38</sup> See Gately June 2005 Decl. ¶ 15 & New Figure 3.4.

a mismatch between the revenues per VGE and the costs per VGE, making Gately's comparison of the two misleading and unreliable for its intended purpose.<sup>39</sup>

23. Moreover, completely aside from the issue of whether ARMIS cost data are reliable, I was unable to verify the cost and revenue data used in Gately's comparison of the two in New Figure 3.4. Gately's analysis does not state the actual amounts of revenue and costs per VGE. Rather, it uses an indexing mechanism that purports to compare each subsequent year's results to a base year (1996). It is not readily apparent how Gately's indexing mechanism works, and Gately does not provide an explanation. In any event, however, given the distortions in ARMIS data caused by outdated allocation factors required by the Freeze, among other problems, any comparison between ARMIS-reported costs per VGE and per-VGE revenues is not reliable or meaningful.

**V. PARTIES COMPLAINING ABOUT HIGH SPECIAL ACCESS RATES OF RETURN FOR BOCS UNDERSCORE THE VERY REASONS WHY ARMIS COST DATA SHOULD NOT BE RELIED ON.**

24. As discussed above, allegations of commenters that BOC special access rates of return are "too high," based solely or primarily on unreliable ARMIS cost data are misguided.<sup>40</sup> Indeed, even as certain parties make these arguments, they underscore key reasons why such data is unreliable. In particular, Uri and Zimmerman confirm a key factual basis for the likely conclusion that ARMIS-reported costs are under-allocated to special access: the dramatic growth in special access volumes relative to other services. According to Uri and Zimmerman,

---

<sup>39</sup> Data provided by Nextel at page 15 comparing percent increases in special access revenues to percent increases in special access expenses and investment for the period 2000 – 2004 suffer from the same shortcomings. The allocations of expense and investment costs are distorted by the Freeze, resulting in a revenue/cost mismatch.

<sup>40</sup> See *supra* ¶ 2 & n.2.

“the demand for special access service is growing and continues to do so in both relative and absolute terms.”<sup>41</sup> Uri and Zimmerman also state that “[c]oincident” with the nearly four-fold growth in special access service revenue from approximately \$3 billion in 1996 to over \$12 billion in 2002 was the “increase in importance of special access revenue as a proportion of total LEC revenue and an increase in the importance of special access lines relative to the total number of LEC access lines.”<sup>42</sup> Uri and Zimmerman state that the “percent of special access lines relative to all access lines” grew from 8.9 percent in 1996 to nearly 41 percent by 2002.<sup>43</sup> Thus, Uri and Zimmerman emphasize the dramatic growth in special access volumes and the importance of special access lines. Such growth and importance would likely have necessitated proportionately greater investment in facilities used for special access relative to other services, even *after* 2000 — the year upon which, under the *Freeze*, the allocations factors still used today by ILECs are based. The proportionately greater investment in special access facilities likely made by the BOCs, in turn, would render ARMIS-reported cost data ever more obsolete and would cause special access rates of return to be increasingly distorted.

## VI. CONCLUSION

25. As I explain in both my initial and this reply declaration, the outdated cost allocation rules and the Freeze severely undermine the reliability of the special-access-specific rates of return calculated using ARMIS data. Since the Freeze locked in then-existing categorical and jurisdictional separations allocators, any shifts or changes in usage patterns since

---

<sup>41</sup> Uri and Zimmerman at 125.

<sup>42</sup> *Id.* at 126; *see also id.* (special access grew in importance “relative to switched access service”).

<sup>43</sup> *See id.*

2000 are not properly reflected in the cost allocation results reported in ARMIS. Because the Freeze occurred during a period when special access demand has rapidly increased, the likely result is a continually worsening mis-match between costs and revenues on a jurisdictional, access element basis. This not only distorts the calculated special access rates of return, it would also distort any analysis of the underlying costs for special access as reported in ARMIS. Therefore, other commenters' reliance on the use of this ARMIS data is inappropriate. In addition, much of the analyses provided by these commenters were also plagued by conceptual or quantitative flaws. These flaws coupled with the inherent deficiencies of ARMIS service-specific cost data render these commenters' analyses unpersuasive and further demonstrate that the Commission should not rely upon this ARMIS data for the purposes of this proceeding. Finally, aside from the distortions caused by the separations rules underlying ARMIS data, it is problematic to consider the BOCs' special-access-specific rates of return in isolation from the company's earnings from other operations, especially in light of the fact that the BOCs' combined interstate/intrastate rate of return has trended down in recent years, from 16% in 1999 to 13% in 2004.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

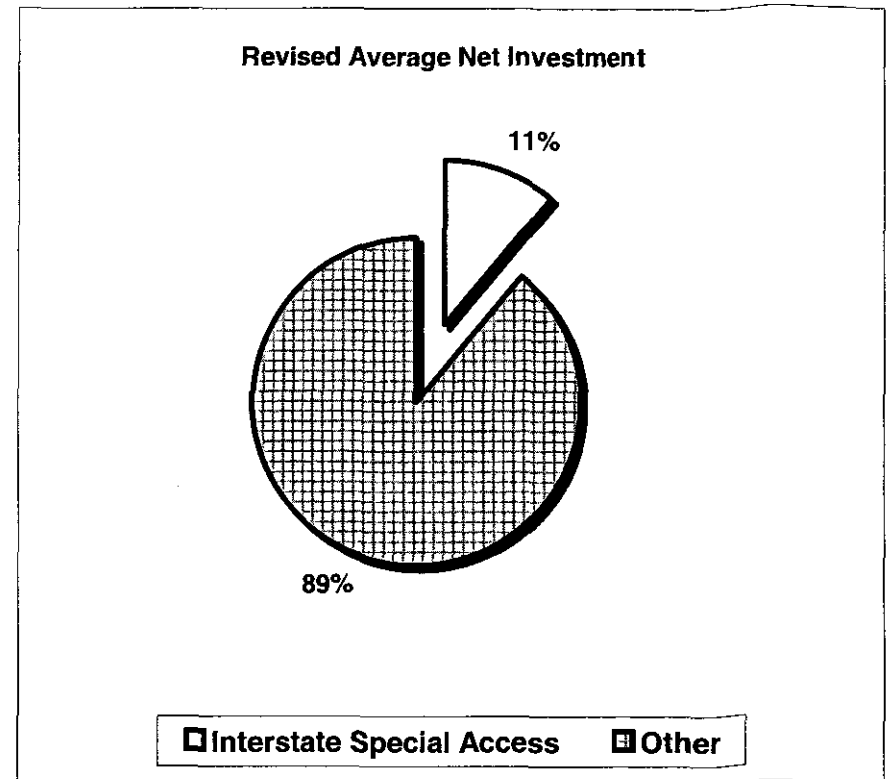
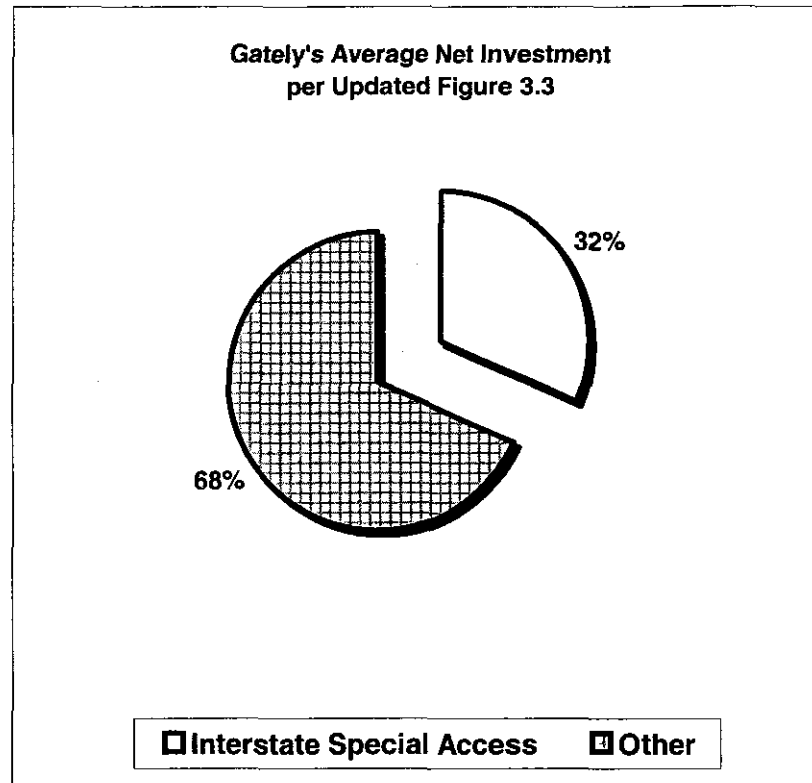
Executed on July 29, 2005.

Dave Toti  
David Toti





## Attachment 1



### Average Net Investment

- A. Interstate Special Access
- B. Combined Interstate Plus Intrastate
- C. Interstate Special Access as a Percent of Combined Interstate Plus Intrastate

<u>BellSouth</u>	<u>Qwest</u>	<u>SBC</u>	<u>Verizon</u>	<u>Total BOC</u>
1,233,462	884,989	2,241,800	4,786,581	9,146,832
16,542,956	11,486,913	22,842,904	32,352,425	83,225,198
7.5%	7.7%	9.8%	14.8%	11.0%

Source: ARMIS Report 43-01.



E

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of	)	
	)	
Special Access Rates for Price Cap Local	)	WC Docket No. 05-25
Exchange Carriers	)	
	)	
AT&T Corp. Petition for Rulemaking to Reform	)	
Regulation of Incumbent Local Exchange Carrier	)	RM-10593
Rates for Interstate Special Access Services	)	
	)	

**REPLY DECLARATION OF JOHN C. KLINK  
AND MICHAEL R. BARANOWSKI  
ON BEHALF OF SBC COMMUNICATIONS INC.**

**I. INTRODUCTION AND STATEMENT OF QUALIFICATIONS**

1. We are John C. Klick and Michael R. Baranowski. We are Senior Managing Directors of FTI Consulting, Inc., with offices located at 1201 I Street, NW, Suite 400, Washington, DC 20005. Since the late 1980s we have been involved in analyzing issues related to productivity for a variety of network industries, including the telecommunications industry. We submitted an Initial Declaration in this proceeding on June 13, 2005.<sup>1</sup> Copies of our curricula vitae are attached as Exhibits 1 and 2, respectively, to that Initial Declaration.<sup>2</sup>

2. We have been asked by SBC Communications Inc. ("SBC") to respond to the portion of the Opening Comments submitted by the Ad Hoc Telecommunications Users Committee ("Ad Hoc") that relates to the potential use of a so-called "implicit X-

<sup>1</sup> See Declaration of John C. Klick and Michael R. Baranowski On Behalf of SBC Communications, Inc. ("Klick & Baranowski Initial Decl.").

<sup>2</sup> Unless otherwise noted, all Declarations and Comments referenced in this Declaration were filed in WC Docket No. 05-25 on June 13, 2005.

factor" in a post-CALLS price cap regulatory regime for special access services.<sup>3</sup> These issues are raised at pages 43 through 48 of Ad Hoc's Opening Comments.

3. This Reply Declaration focuses exclusively on Ad Hoc's proposals on this issue. However, the Commission should not interpret this narrow focus as implicitly conceding that some form of productivity adjustment would be appropriate. As we explained in our Initial Declaration, there is no basis for reimposition of an X-factor reflecting supposed productivity gains in the provision of special access that outpace productivity growth in the rest of the economy. We will not repeat all of those arguments here, but we do want to emphasize our continued belief that the Commission should not include *any* productivity adjustment as part of a post-CALLS price cap regime.

## II. SUMMARY OF CONCLUSIONS

4. Ad Hoc's proposals for *how* to calculate a productivity-based X-factor for the ILECs' special access services put the cart before the horse, since Ad Hoc provides no credible evidence that any such productivity adjustment is warranted in the first place. Ad Hoc provides no evidence suggesting that productivity gains in the provisioning of special access services will exceed gains in the economy as a whole. Imposing an X-factor without evidence that productivity differentials in fact exist risks undermining the very goal of price cap regulation by preventing carriers from reaping the benefits of their efficiency gains, while inefficiently discouraging would-be wireline and intermodal competitors from entering the special access market.

---

<sup>3</sup> Comments of Ad Hoc Telecommunications Users Committee at 44 ("Ad Hoc Comments").

5. Even if Ad Hoc *had* provided evidence of productivity gains in special access services, its proposals for reform would make no sense. The details of Ad Hoc's proposals are unclear. To the extent Ad Hoc is suggesting that the Commission should continually adjust the X-factor to produce an 11.25% (or some other) rate of return, this is not price cap regulation at all: it is a form of rate-of-return regulation, and would cause all of the inefficiencies that led the Commission to abandon this form of regulation in the first place. The Commission has already rejected this idea of sneaking rate-of-return regulation in through the back door via constant X-factor adjustments on the ground that it may deny "sufficient incentives for productivity growth, to the extent that increases in industry-wide earnings would increase the X-factor."<sup>4</sup> To radically switch course now would destroy the economic incentives for competitive entry, create tremendous regulatory risk for existing and potential service providers, and create the potential for significant economic harm. Adopting Ad Hoc's proposal would undermine the Commission's credibility by showing that it is not committed to price caps.

6. To the extent Ad Hoc is suggesting something more limited—that the new X-factor be calculated "implicitly" by looking at the difference between historical apparent rates of return reported in ARMIS and an 11.25% (or some other) benchmark—it would still be misguided. The service-specific rates of return reported in ARMIS are so skewed by ARMIS's multi-billion dollar cost misallocations caused by the separations freeze in 2001 that there is no reason whatsoever to think that the difference between ARMIS and benchmark rates of return reflect any kind of productivity gains. And even if

---

<sup>4</sup> See Fourth Report and Order in CC Docket No. 94-1 and Second Report and Order in CC Docket No. 96-262, *Price Cap Performance Review for Local Exchange Carriers; Access Charge Reform*, 12 FCC Rcd 16642, 16654 ¶ 22 (1997) ("1997 LEC Performance Review").

the Commission could divine some measure of past productivity for special access from historical ARMIS data, which it cannot, there is no basis for assuming that such a measure would be an accurate forecast of *future* productivity.

7. Ad Hoc is also wrong when it suggests this kind of “‘implicit’ X-factor would be equivalent to one calculated bottom-up by the Total Factor Productivity (“TFP”) method the Commission used previously. The TFP entails a detailed analysis of productivity and input price trends. Ad Hoc argues that an “implicit” X-factor “can be implemented more directly and more simply than the data- and analysis-intensive TFP approach,” and that “the dedicated nature of special access services and the requirements of the Commission’s accounting rules make development of a unique X for special access services quite tenable, particularly if the Commission chooses to develop that X using something akin to the Frentrup and Uretsky model used in CC Docket 94-1.”<sup>5</sup> Ad Hoc asserts that “[i]n principal [sic], both approaches should produce roughly equivalent results,”<sup>6</sup> but provides no analysis why this should be the case. In fact, there is every reason to believe that the approaches would produce divergent results, and the “implicit” approach would yield inaccurate results, as the Commission has recognized.<sup>7</sup> Of course, for the reasons stated in our Initial Declaration, it would be virtually impossible as a practical matter for the Commission to calculate a reliable productivity adjustment for special access, or, more appropriately, the subset of special access services still subject to

---

<sup>5</sup> Ad Hoc Comments at 44, 46. Ad Hoc is referring to a study performed in 1989 and updated in 1991 by FCC economists J. Christopher Frentrup and Mark I. Uretsky. See *1997 LEC Performance Review* at 16651 ¶ 17 (citing Second Report and Order, *Policy and Rules Concerning Rates for Dominant Carriers*, 5 FCC Rcd 6785, 6885 & App. C (1990) (“*LEC Price Cap Order*”)).

<sup>6</sup> Ad Hoc Comments at 46.

<sup>7</sup> See *1997 LEC Performance Review* at 16651-54 ¶¶ 16-23.

price caps, using *any* method.<sup>8</sup> But using the Frentrup-Uretsky model, would only make matters worse.

### III. BACKGROUND

8. In the *CALLS* order,<sup>9</sup> the Commission decided to eliminate the productivity factor as a means of adjusting price caps for special access and other ILEC services. Instead, the Commission established a separate special access basket of services and adopted a special access X-factor that was explicitly *not* designed to reflect changes in productivity.<sup>10</sup> Rather, the *CALLS* X-factor was designed to reduce special access rates by specific targeted amounts over a five-year period as a transition to “economically rational competition.”<sup>11</sup> At the end of this period, price cap rates effectively would be frozen at 2003 levels unless the Commission found marketplace developments warranted further regulatory changes.<sup>12</sup> The Commission noted that this mechanism would resolve the ongoing uncertainty over the appropriate level of the X-factor, which it concluded had disrupted business expectations and the future business decisions of ILECs and new entrants alike.<sup>13</sup>

---

<sup>8</sup> See Klick & Baranowski Initial Decl. ¶¶ 3, 24-33.

<sup>9</sup> Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long Distance Users; Federal-State Joint Board On Universal Service*, 15 FCC Rcd 12962 (2000) (“*CALLS Order*”).

<sup>10</sup> See *id.* at 12978 ¶ 38.

<sup>11</sup> *Id.* at 12977 ¶ 36.

<sup>12</sup> *Id.* at 13025 ¶ 149.

<sup>13</sup> *Id.* at 13034 ¶ 174.

9. This X-factor was subsequently invalidated in court. In *Texas Office of Public Utility Counsel v. FCC*, the Fifth Circuit rejected the Commission's stated rationale for the *CALLS* X-factor, stating "[e]ven if the X-Factor is no longer tethered to any productivity measure, the FCC still needs to provide a rational explanation of how it derived the precise percentage."<sup>14</sup>

10. As we noted in our Initial Declaration, in assessing whether to re-impose a productivity-based X-factor, the Commission must bear in mind why price cap regulation was adopted in the first place and what role the X-factor was intended to play in that scheme.<sup>15</sup> Price caps are intended to emulate the prices that would result in a competitive market *and* to give carriers incentives to invest in productivity-enhancing technologies—incentives that are absent under rate-of-return regulation, which allows regulated firms to pass through their costs to consumers.<sup>16</sup> Under price cap regulation, a firm's prices for regulated services are capped, and the firm is allowed to retain whatever profits it may earn under those prices. Price cap regulation thus creates strong incentives for firms to increase efficiency in order to increase profits.

11. Under price cap regulation, a firm's prices typically are adjusted each year by inflation, and may include an adjustment to represent the amount by which the regulated firm is expected to experience productivity changes that differ significantly from economy-wide productivity gains or input price changes that differ significantly

---

<sup>14</sup> 265 F.3d 313, 329 (5th Cir. 2001). The Commission provided additional explanation for the non-productivity-related X-factor two years later, shortly before the 6.5% factor was due to expire. See Order on Remand, *Access Charge Reform; Price Cap Performance Review for LECs; Low-Volume Long Distance Users; Federal-State Joint Board on Universal Service*, 18 FCC Rcd 14976 (2003).

<sup>15</sup> See Klick & Baranowski Initial Decl. ¶¶ 3-5, 16-23.

<sup>16</sup> See *id.* ¶ 10.



from inflation in the economy as a whole.<sup>17</sup> (This adjustment is generally referred to as a “productivity factor” or an “X-factor”.) Thus, if either (1) input prices required to produce capped services (*i.e.*, prices for the materials, labor and capital) are expected to increase at a slower rate than input prices for the economy as a whole, or (2) productivity in the production of price cap services is expected to increase more rapidly than productivity for the economy as a whole, then an “X-factor” adjustment would be made to ensure that prices for those services increase more slowly (or decline more rapidly, if inflation is flat or negative) than prices for the economy as a whole.<sup>18</sup> Application of such a factor would be designed to ensure that any unit cost reductions in excess of those experienced in the economy as a whole are passed through to consumers, to some extent at least, in the form of lower prices.<sup>19</sup>

12. To set a productivity or “X-factor,” the regulator must first develop a methodology for calculating the productivity of an industry, firm, or service. In other words, the regulator must quantify the extent to which—comparing one period to another—one can provide a higher quantity of a product or service (or group of products or services) with the same amount of input resources, or provide the same quantity of products or services with a smaller amount of input resources.<sup>20</sup>

---

<sup>17</sup> See *CALLS Order* at 13018 ¶ 135; Klick & Baranowski Initial Decl. ¶ 11.

<sup>18</sup> By the same token, if either (1) input prices for producing the price cap services are expected to increase at a more rapid rate than input prices for the economy as a whole, or (2) productivity in the production of price cap services is expected to increase more slowly than productivity for the economy as a whole, then prices for price cap services should increase more rapidly than prices for the economy as a whole.

<sup>19</sup> See, *e.g.*, 1997 *LEC Performance Review* at 16647 ¶ 5.

<sup>20</sup> See Klick & Baranowski Initial Decl. ¶ 12.

13. We noted in our *Initial Declaration* that calculating changes in productivity gives rise to a host of difficult issues. As a result, efforts over the years by regulators and government economists to calculate productivity improvements have been the subject of disputes and litigation in numerous regulated industries and before the courts. Resolution of these issues has been further complicated by the fact that companies rarely maintain data in the normal course of business with the primary purpose of making productivity calculations.<sup>21</sup>

14. We also noted that calculation of an economically relevant productivity factor faces an additional fundamental problem: While a productivity factor is designed to operate *prospectively*, the data upon which it is based are *historical* in nature. A regulator therefore must establish some basis to predict the degree to which *future* productivity gains will mirror *past* gains, which is inherently speculative. This is particularly true in the telecommunications industry, which has faced dramatic competitive, technological, and regulatory transformations in the recent past.<sup>22</sup>

---

<sup>21</sup> The Bureau of Labor Statistics ("BLS") has identified one of the many difficulties associated with tracking productivity. As it observed, "[w]ith regard to labor input measures, the principal problems are data gaps. Information is needed on hours worked by all persons . . . in an individual industry. But although data on hours worked are collected . . . they tend to be limited in scope, or otherwise inconsistent with the output data developed." See Jerome A. Mark, *Measuring Productivity in Service Industries*, Monthly Labor Review, at 4 (June 1982) available at <http://www.bls.gov/opub/mlr/1982/06/art1full.pdf>. For example, labor hours tend to be accumulated based on the organization for which an employee works (*i.e.*, reflecting how the employee is managed) and less frequently (and less reliably) in terms of what output services the employee is providing. Thus, for example, we know the location at which a network engineer is assigned, but we do not necessarily know whether he is engineering dedicated special access services, working to resolve trouble reports, or working to develop next year's budget. As a result, trying to develop productivity measures under such circumstances for any given activity or service becomes problematic.

<sup>22</sup> See Klick & Baranowski Initial Decl. ¶ 14.

15. For all of these reasons, the Commission's implementation of price caps has been marked by repeated unsuccessful efforts to study and predict productivity.<sup>23</sup> The D.C. Circuit rejected the Commission's most recent effort as arbitrary.<sup>24</sup> The court specifically questioned the basis upon which the Commission calculated the level of productivity improvement that best captured past gains, and the Commission's assumption that past productivity improvements would continue at the same levels into the future.<sup>25</sup> As we demonstrated in our Initial Declaration, there is no reason to believe the Commission could do a better job now than it has before of determining past or future changes in LEC productivity, or that it could do so for any particular subset of LEC services.<sup>26</sup> And as we discuss below, far from assisting the Commission in addressing these problems, the "implicit" X-factor proposed by Ad Hoc would make them even more acute.

#### **IV. AD HOC PRESENTS NO EVIDENCE THAT A PRODUCTIVITY ADJUSTMENT IS REQUIRED**

16. Before Ad Hoc can prescribe a *method* for calculating a productivity-based X-factor, it must prove that such a factor is needed in the first place, and this it has utterly failed to do. As we noted in our Initial Declaration, a productivity factor is *not* an inherent component of a price cap regime, as the operation of the *CALLS* regime over the past two years illustrates.<sup>27</sup> To the contrary, if there is no specific reason to believe that a

---

<sup>23</sup> See, e.g., *Bell Atlantic Tel. Cos. v. FCC*, 79 F.3d 1195, 1202-1204 (D.C. Cir. 1996) (reciting history of FCC efforts to study productivity).

<sup>24</sup> *USTA v. FCC*, 188 F.3d 521 (D.C. Cir. 1999) ("*X-Factor Decision*").

<sup>25</sup> See *id.* at 525-29.

<sup>26</sup> See Klick & Baranowski Initial Decl. ¶ 15.

<sup>27</sup> See *id.* ¶ 16.

regulated service will experience productivity gains (or input savings) that are greater than those of the economy overall, there is no reason whatsoever to impose a productivity factor. Indeed, the D.C. Circuit struck down the Commission's attempt to calculate a productivity factor where the Commission failed to "state a coherent theory" supporting its conclusion that differential productivity gains in fact exist.<sup>28</sup>

17. Furthermore, imposing a productivity adjustment when there is no evidence that productivity differentials are likely would be counterproductive. Even if it were reasonable to assume that the telecommunications industry will be more productive in the future than the economy as a whole (and Ad Hoc has not shown why this would be the case), Ad Hoc fails to acknowledge that new entrants and ILECs have entirely different input costs, and that ILECs provide a substantial number of legacy services over older facilities, and are required to operate in rural and other difficult-to-serve areas.<sup>29</sup> There is no basis to assume that the ILECs will match the productivity gains of some of their newer intra- and intermodal competitors, and forcing them to do so through an X-factor would send an inappropriate economic signal.<sup>30</sup> Such action would run a significant risk of *slowing* the growth of competition by depressing prices, making it *appear* more attractive for competitors to rely on ILEC tariffed services rather than their own facilities, even when such reliance would be economically inefficient.<sup>31</sup> Where other network providers are more efficient, they should be able to enter the market and under-price the

---

<sup>28</sup> See *X-Factor Decision*, 188 F.3d at 526.

<sup>29</sup> See Klick & Baranowski Initial Decl. ¶¶ 18-19.

<sup>30</sup> See *id.*

<sup>31</sup> See *id.* ¶ 23.

ILECs—and that is a far more rational means of pressuring the ILECs to achieve real productivity gains than an arbitrary and artificial regulatory price reduction.<sup>32</sup>

18. Additionally, even if it were reasonable to assume that LEC productivity in particular is likely to improve at a faster rate than productivity economy-wide, there would be absolutely no basis to assume that the same is true for the provision of special access, or for a subset of such services, in particular. As Ad Hoc itself recognizes,<sup>33</sup> it makes no sense to merely *assume* that productivity improvements experienced by an industry or a group of companies overall would apply to individual services, and on that basis to impose productivity “improvements” on prices charged for a line of business that was not actually experiencing that level of improvement.<sup>34</sup>

19. To the contrary, as we observed in our Initial Declaration, there are reasons to conclude that ILECs will *not* experience productivity improvements in at least some aspects of their special access businesses comparable to those likely to be achieved in the rest of their services. For example, to the extent that some special access services such as DS1 services are provided over copper facilities—which we understand from SBC is frequently the case today—the productivity levels for those services is unlikely to ever mirror the types of improvements one would expect for wireless and some fiber-based services.<sup>35</sup> Likewise, one would not expect services that rely on facilities dedicated to a

---

<sup>32</sup> See *id.* ¶ 18 & n.21.

<sup>33</sup> See Ad Hoc Comments at 45-46 (“In the instant case, where the X is being designed to apply *only* to the special access basket, use of an X-Factor based upon firm-wide productivity rather than an X-Factor based upon the production of special access services within the firm will necessarily result in an X that is wrong for special access.”).

<sup>34</sup> See Klick & Baranowski Initial Decl. ¶ 24.

<sup>35</sup> Declaration of Parley C. Casto On Behalf of SBC Communications Inc. *passim* (“Casto Initial Decl.”); Klick & Baranowski Initial Decl. ¶ 20.

single customer, such as end-user channel termination services, to achieve the same productivity levels as services provided over larger capacity, shared facilities, such as interoffice transport, where greater efficiency gains are possible. The lack of any evidence that productivity levels for DS1 (and possibly DS3) special access services are higher than those in the economy at large strongly argues against the application of a productivity factor to those services.

20. Finally, even if Ad Hoc had proffered evidence that ILEC special access services would realize differential productivity gains, the present competitive state of the special access market would still obviate the need for a productivity-based adjustment. As Mr. Casto and Professor Kalt demonstrate in their declarations,<sup>36</sup> the special access market is currently highly contestable at all levels, is extremely competitive at many levels, and will become increasingly competitive as new wireline and intermodal competitors continue to enter the market.<sup>37</sup> Accordingly, so long the Commission broadly grants the ILECs downward pricing flexibility, it will rarely be the case that a regulatory productivity adjustment is needed to ensure that prices reflect competitive pressures (and, by extension, actual productivity improvements).<sup>38</sup> If a LEC *fails* to price its services to reflect real productivity improvements, this will create economically appropriate opportunities for competitive entry by intra-and intermodal competitors.

---

<sup>36</sup> See Casto Initial Decl. *passim*; Statement of Professor Joseph P. Kalt On Behalf of SBC Communications Inc. ¶¶ 10, 30-55.

<sup>37</sup> See Klick & Baranowski Initial Decl. ¶ 21.

<sup>38</sup> See *id.*

**V. CONSTANTLY ADJUSTING THE X-FACTOR TO PRODUCE AN 11.25% RATE OF RETURN WOULD BE A DISASTROUS REVERSION TO FAILED REGULATION**

21. Ad Hoc asks the Commission to set an X-factor by “calculating the value of the offset factor that would have been required to maintain RBOC earnings at their authorized level of 11.25%.”<sup>39</sup> It is unclear, however, what Ad Hoc intends for the Commission to do with this factor once calculated. On the one hand, Ad Hoc could be suggesting that the Commission repeat this calculation every year, adjusting the X-factor each time to maintain an 11.25% rate of return. Alternatively, Ad Hoc may be suggesting that the Commission perform this calculation just once and then carry that calculated factor forward in future years. Neither proposal would make any sense.

22. If Ad Hoc is really suggesting that the Commission should continually adjust the X-factor to yield a consistent 11.25% rate of return, the Commission should reject this proposal out of hand. This would simply be rate of return regulation in (a not very good) disguise. It would also be wholly contrary to the efficiency-promoting objectives of price caps. As the Commission observed in its *Notice*, price cap regulation is designed to foster a very different set of incentives from those created by rate of return regulation; “[p]rice cap regulation encourages incumbent LECs to improve their efficiency by harnessing profit-making incentives to reduce costs, invest efficiently in new plant and facilities, and develop and deploy innovative service offerings.”<sup>40</sup> Under this proposal, however, ILECs would have no incentive to make these investments; regardless of what they did, the X-factor would simply be adjusted up or down to produce

---

<sup>39</sup> Ad Hoc Comments at 43-44.

<sup>40</sup> See Order and Notice of Proposed Rulemaking, *Special Access Rates for Price Cap Local Exchange Carriers*, 20 FCC Rcd 1994, 1998 ¶ 11 (2005) (“*Special Access NPRM*”).

the same rates of return. Productivity-increasing investments would only be rewarded with a higher X-factor to take the new profits away. Such a program would defeat the purpose for adopting price cap regulation in the first place.

23. Indeed, for this very reason, the Commission rejected a substantially similar proposal in its *1997 LEC Performance Review Order*. There, AT&T had proposed a “Historical Revenue Method” that “would set the X-Factor prospectively at the level that would have, in retrospect, produced an industry-wide average rate of return of 11.25 percent under price-cap regulation.”<sup>41</sup> The Commission rejected AT&T’s proposal on ground that it “would create substantially similar incentives to those under rate-of-return regulation, because the X-Factor would be explicitly linked to earnings.”<sup>42</sup> The Commission further explained that the Historical Review Method “might not provide sufficient incentives for productivity growth, to the extent that increases in industry-wide earnings would increase the X-Factor.”<sup>43</sup> The Commission was right to reject the Historical Revenue Method in 1997, and Ad Hoc has provided no basis at all for the Commission to adopt substantially the same proposal now.

#### **VI. AD HOC’S METHOD FOR CALCULATING AN “IMPLICIT X-FACTOR” FROM ARMIS DATA WILL NOT YIELD ACCURATE SERVICE-SPECIFIC PRODUCTIVITY FIGURES**

24. To the extent Ad Hoc is proposing a methodology for a one-time calculation of an X-factor (rather than a continuous adjustment to produce a constant rate of return) it fares no better. Ad Hoc concedes that the only X-factor that the Commission could adopt

---

<sup>41</sup> *1997 LEC Performance Review* at 16653-54 ¶ 22.

<sup>42</sup> *Id.* at 16654 ¶ 22.

<sup>43</sup> *Id.*



would be one that accurately measures productivity growth for special access services in particular; use of a firm-wide productivity measure would be error.<sup>44</sup> But for all the reasons explained in the initial Declaration of David Toti<sup>45</sup> and in our initial declaration,<sup>46</sup> ARMIS data cannot be used to calculate accurate service-specific rates of return: ARMIS seriously misallocates costs among services (to the tune of billions of dollars), resulting in substantially inflated apparent returns for special access services.<sup>47</sup> There is absolutely *no* reason to think that the differences between these inflated ARMIS rates of return and the 11.25% figure reflects any kind of actual gains in productivity that can be used to derive an implicit X-factor. Indeed, even the Frentrup-Uretsky model on which Ad Hoc purports to rely did not try to use ARMIS data to calculate a service-specific

---

<sup>44</sup> Ad Hoc Comments at 45-46 (“[W]here the X is being designed to apply *only* to the special access basket, use of an X-Factor based upon firm-wide productivity rather than an X-Factor based upon the production of special access services within the firm will necessarily result in an X that is wrong for special access.”); *see also id.* at 46 (proposing use of “the accounting rates of return flowing out of the ARMIS system”). Moreover, as we emphasized in our Initial Declaration, it would make sense to include in a productivity analysis *only* those special access services that are properly subject to price caps. To the extent the Commission concludes, as it should, that OCn level and packet switched services should be removed from the special access price cap regime altogether – because they are subject to pervasive competition (or are susceptible to such competition) – then it would make no sense to include those services in assessing the productivity of the remaining price-capped services. *See* Klick & Baranowski Initial Decl. ¶ 25.

<sup>45</sup> Declaration of David Toti on Behalf of SBC Communications Inc. *passim* (“Toti Initial Decl.”).

<sup>46</sup> *See* Klick & Baranowski Initial Decl. ¶ 27 & n.25.

<sup>47</sup> *See* Toti Initial Decl. ¶¶ 29-37. The Commission itself has acknowledged that the ARMIS allocations are outdated. *See generally*, Notice of Proposed Rulemaking, *Jurisdictional Separations Reform and Referral to the Federal-State Joint Board*, 12 FCC Rcd 22120 (1997); Report and Order, *Jurisdictional Separations Reform and Referral to the Federal-State Joint Board*, 16 FCC Rcd 11382 (2001) (“*Separations Freeze Order*”).

productivity factor; the most that study attempted to do was to estimate productivity *industry-wide*.<sup>48</sup>

25. In its original deliberations on price caps, the Commission dismissed the effort to derive *any* service-specific productivity factor from data obtained through the Commission's Part 36 separations rules—*i.e.*, ARMIS data—as a fool's errand. The Commission observed that such an approach would be flawed due to its reliance on inherently arbitrary allocations of the underlying costs among services,<sup>49</sup> noting that it is impossible to accurately “distinguish the productivity associated with interstate services from that associated with intrastate services” or “between the productivity associated with regulated services from that associated with nonregulated services, or to distinguish the productivity associated with any other service or group of services.”<sup>50</sup> Nothing has changed since the Commission reached this conclusion. To the contrary, the separations “freeze” described in Mr. Toti's Initial Declaration means that the allocation errors in ARMIS data are even more severe than in 1995.<sup>51</sup>

26. Furthermore, even if meaningful special access-specific rates of return could be obtained from ARMIS data—and they cannot—Ad Hoc fails to explain how

---

<sup>48</sup> The Commission observed in its 1995 *Notice of Proposed Rulemaking* that “[t]he X-factor computed by the [Frentrup-Uretsky] study . . . is not technically a productivity factor. Rather, the resulting factor combines productivity and input price information for the industry relative to the economy as a whole, to determine a cost differential between the LEC industry and the economy. It is, therefore, technically more precise to describe the X-Factor produced by the Frentrup-Uretsky historical study as a cost-differential factor rather than a productivity factor.” See Fourth Further Notice of Proposed Rulemaking, *Price Cap Performance Review for Local Exchange Carriers*, 10 FCC Rcd 13659, 13672 ¶ 85 (1995) (“*Fourth Further NPRM*”).

<sup>49</sup> *Id.* at 13670 ¶ 69 (1995).

<sup>50</sup> *Id.*

<sup>51</sup> See Toti Initial Decl. ¶¶ 3, 16-20; *Separations Freeze Order* at 11383 ¶ 1; Klick & Baranowski Initial Decl. ¶ 28.

measuring past returns against a particular benchmark could yield a reliable prediction of future ILEC productivity gains for these services. As we explained in our Initial Declaration, a productivity factor is designed to operate *prospectively*.<sup>52</sup> Thus it must capture the degree to which the productivity of the firm or service at issue is expected to improve in the future vis-à-vis the economy as a whole. A regulator therefore must have some evidentiary basis for assuming that future productivity gains will mirror past gains, and the courts have been very skeptical of this assumption.<sup>53</sup> Ad Hoc does not even try to explain why the ILECs' expected productivity gains going forward would be mathematically identical to their accounting rates of return for past periods.

---

<sup>52</sup> See Klick & Baranowski Initial Decl. ¶ 14.

<sup>53</sup> See, e.g., *Shell Oil Co. v. Federal Power Comm'n*, 520 F.2d 1061, 1078 (5th Cir. 1975) (noting "special problems [faced by] the Commission in using historical figures to predict future productivity"); *X-Factor Decision*; *Association of Oil Pipelines v. FERC*, 281 F.3d 239, 247 (D.C. Cir. 2002) (describing efforts to forecast departures from historical trend as being characterized by "complexity and iffiness"). In addition, disputes about the ability to accurately predict future productivity gains were a central focus in UNE arbitrations before the FCC and state commissions. See, e.g., Memorandum Opinion and Order, *Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration*, 18 FCC Rcd 17722, 17776-781 ¶¶ 128-141 (2003) (discussing the parties conflicting positions on productivity gains); Opinion Establishing Revised Unbundled Network Element Rates for Pacific Bell Telephone Company d/b/a SBC California, *Joint Application of AT&T Communications of California, Inc. (U 5002 C) and WorldCom, Inc. for the Commission to Reexamine the Recurring Costs and Prices of Unbundled Switching in Its First Annual Review of Unbundled Network Element Costs Pursuant to Ordering Paragraph 11 of D.99-11-050*, Application 01-02-024, *et al.*, at 65-68 (Cal. P.U.C. Sept. 23, 2004) (discussing differing productivity assumptions and cost model implementation).

## VII. AD HOC'S ASSERTION THAT ITS IMPLICIT X-FACTOR APPROACH PRODUCES RESULTS EQUIVALENT TO THE TFP APPROACH IS MISTAKEN

27. Whichever way Ad Hoc intends the Commission to use the “implicit X-factor,” Ad Hoc argues that its methodology will yield results that are similar to those of the bottom-up “total factor prediction (TFP)” approach that the Commission has used in the past. Ad Hoc asserts that “[i]n principal [sic] both approaches [*i.e.*, a TFP approach and an ‘implicit’ X-factor approach] should produce roughly equivalent results.”<sup>54</sup> Ad Hoc is wrong. The “bottom-up” TFP approach is designed to exclude the effect of changes in the mix of outputs produced, which can distort any productivity calculation. The Frentrup-Uretsky approach, or any other approach that is determined “by calculating the value of the offset factor that would have been required to maintain RBOC earnings at their authorized level of 11.25%,”<sup>55</sup> does not correct for changes in the mix of outputs and therefore yields a distorted productivity calculation.

28. A simple example will illustrate this issue.<sup>56</sup> Suppose a company provides two services, one of which can be provided more productively than the other. For simplicity, assume that one service requires 1 unit of input for every 2 units of output, and the other requires 1 unit of input for every 4 units of output, and suppose that in the

---

<sup>54</sup> Ad Hoc Comments at 44.

<sup>55</sup> *Id.* at 43-44.

<sup>56</sup> In this example, we have assumed that there are no costs that are joint and common between Service 1 and Service 2. Thus, we focus exclusively on the distortion that is created by ignoring changes in the mix of Service 1 and Service 2. Joint and common costs would render the arithmetic more complicated, but the principle remains the same—failure to control for changes in service mix distorts the calculation of firm-wide changes in productivity, and in some cases of changes in productivity of categories of services (such as special access).

base year, 100 units of each service are provided. In the base year, overall productivity (output per unit of input) is therefore 2.667:

Base Year	Inputs	Outputs	Productivity (Output per unit of Input)	Unit Cost (Input per unit of Output)
Service 1	50	100	2.000	.500
Service 2	25	100	4.000	.250
Total Firm	75	200	2.667	.375

Now, suppose that in Year 2, the productivity associated with furnishing each service remains the same, but the output mix changes so that the firm sells 200 units of Service 2 while it continues to sell only 100 units of Service 1. A simplistic approach like Ad Hoc's that does not correct for changes in the output mix would suggest that the overall level of firm productivity has increased between the Base Year and Year 2, and that average unit costs have declined, even though the productivity of producing each Service remained exactly the same.

Year 2	Inputs	Outputs	Productivity (Output per unit of Input)	Unit Cost (Input per unit of Output)
Service 1	50	100	2.000	.500
Service 2	50	200	4.000	.250
Total Firm	100	300	3.000	.333

29. Ad Hoc's approach would inaccurately read this as a gain in productivity and force prices down, even though service productivity had not, in fact, changed.<sup>57</sup>

<sup>57</sup> A simple way to envision this problem would be to assume that, in the Base Year, prices for Services 1 and 2 were set at cost. In Year 2, unit costs for each service remain identical, yet an improperly weighted productivity calculation would suggest that cost-based prices for both services should be reduced to account for alleged improvements in productivity.

Economists (and the TFP methodology) address the distortions that result from the shifts in the output-mix by weighting the mix of inputs and outputs for *both* Base Year and Year 2 consistently, *i.e.*, either on the basis of Base Year volumes (or, more often, revenues) or on the basis of Year 2 volumes (or revenues).<sup>58</sup> Either approach, when applied to the above example, would show that overall firm productivity would not have changed between the Base Year and Year 2 and, therefore, that no productivity adjustment to prices would be warranted.<sup>59</sup> This is consistent with the fact that unit costs have not declined, and productivity has not improved, for either of the two services.

30. The potential for output-mix distortion is high in the telecommunications market, where new services are introduced frequently and often experience explosive growth rates causing rapid changes in product mix. This is true, of course, when one is assessing productivity improvements on an industry-wide or firm-wide basis, but it would be just as likely when examining a special access basket in which growth rates for the individual special access services that comprise the basket change at significantly different rates year-to-year.

31. A TFP methodology corrects for output-mix distortion.<sup>60</sup> In contrast, by simply "backing into" an offset factor that would be required to maintain RBOC earnings

---

<sup>58</sup> In some cases, economists develop two sets of productivity indexes, one that uses Base Year weightings and the other that uses Year 2 weightings, and average the results together. In either case, the idea is to ensure that year-to-year changes in productivity are not distorted by changes in service mix over time.

<sup>59</sup> If Base Year weights were used in Table 2, it would be identical to Table 1; if Year 2 weights were used in Table 1, it would be identical to Table 2. In either case, there would be no productivity improvement indicated and, therefore, no adjustment in prices.

<sup>60</sup> Appendix D to the Commission's *1997 LEC Performance Review* demonstrates that the FCC combined both Base Year weightings and Year 2 weightings in order to eliminate changes in mix.

at an 11.25% rate of return, Ad Hoc's "implicit" X-factor approach is incapable of eliminating this distortion.<sup>61</sup> Indeed, the only circumstance in which Ad Hoc's approach would *not* distort price-cap prices would be if a separate rate of return (and, thus, a separate "implicit" X-factor) is calculated for each of the individual products or services within the special access basket, in isolation from all of the other products and services in that basket. This would be impossible based on the way ARMIS data is currently maintained. And even if it were possible with available data, it would not solve the likely disconnect between historical and prospective efficiency gains.

32. There are other differences between the bottom-up and "implicit" approaches to calculating the X-factor, as the FCC has traditionally applied them. One example is in the treatment of capital costs. The FCC's TFP calculations used a "perpetual inventory model" to estimate changes in the level of capital stock, a key input in the productivity calculation. The perpetual inventory approach endeavors to put all elements of capital—both assets invested in long ago and current capital stock additions—into constant dollars. Failure to put the capital stock in constant dollars would suggest that plant invested in 10 years ago (at a lower nominal cost, assuming input

---

<sup>61</sup> To illustrate, suppose the volume of OC-48 special access services provided by a firm increases significantly, while the volume of DS-1 special access services remains the same (or even declines). If, on a DS-1 equivalent basis, OC-48 services can be provided more inexpensively than DS-1 services, the substantial shift in market share for OC-48 services would create the impression that the overall productivity of the firm had improved, even though the productivity experienced in producing each service would be unchanged. As a result, no productivity-based reduction in prices would be warranted. But the growth in OC-48 services would also increase the firm's overall earnings, which would result in an increase in the "implicit" X-factor, or "offset" required to achieve an 11.25% rate of return (assuming the prior year's rate of return is at 11.25% or higher). This, in turn, would suggest that a reduction in prices for *both* DS-1 and OC-48 would be required even though productivity for both services is unchanged, justifying no reduction at all in the price for either service.


prices are increasing) would be more productive, all other things being equal, than plant invested in today because it would appear to be a less expensive source of capital. In contrast, the "implicit" approach simply measures capital stock in terms of book values, which has no way to equalize the costs of old and new capital.

33. In sum, Ad Hoc's unsupported assertion that the TFP and "implicit" X-factor approaches would result in similar X-factors is almost certainly incorrect.



I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on July 29, 2005.

  
\_\_\_\_\_  
John C. Klick

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on July 29, 2005.

  
Michael R. Baranowski